Special Issue

Tea Chemistry, Flavor, and Aroma: Mechanisms, Sensory Attributes, and Processing Optimization

Message from the Guest Editor

Tea (Camellia sinensis) is one of the most consumed beverages worldwide, renowned for its diverse flavors and aromas. These sensory qualities arise from the interaction between chemical composition of fresh leaves and biochemical transformations during processing. Understanding the mechanisms behind the formation of key flavor and aroma compounds is essential for advancing quality control and innovation in the tea industry. This Special Issue welcomes original research and reviews on the chemistry underlying tea's sensory attributes. Topics include the identification and quantification of flavor compounds-from volatile and non-volatile molecules (polyphenols, amino acids, sugars) to macromolecules—that define the taste and aroma of different teas. Studies linking instrumental analysis with sensory evaluation and clarifying the contribution of individual compounds to sensory perception are particularly encouraged. We also invite research on processing optimization, novel technologies, and the influence of cultivar or terroir, as well as metabolomic and analytical approaches that deepen understanding of tea chemistry from leaf to cup.

Guest Editor

Dr. Jiang Shi

Key Laboratory of Tea Biology and Resource Utilization of Ministry of Agriculture, Tea Research Institute, Chinese Academy of Agricultural Sciences, Hangzhou 310008⊠ China

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Foods Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 foods@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Foods (ISSN 2304-8158) is an open access and peer reviewed scientific journal that publishes original articles, critical reviews, case reports, and short communications on food science. Articles are released monthly online, with unlimited free access. Currently, Foods has been indexed by the Science Citation Index Expanded (SCIE - Web of Science), PubMed, and Scopus. Our aim is to encourage scientists, researchers, and other food professionals to publish their experimental and theoretical results as much detail as possible. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global food science community.

Editor-in-Chief

Prof. Dr. Arun K. Bhunia

- 1. Department of Food Science, Purdue University, West Lafayette, IN 47907, USA
- 2. Department of Comparative Pathobiology, Purdue University, West Lafavette. IN 47907. USA

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